

What Is Claimed Is:

1. An active-matrix liquid crystal display
comprising:

a first substrate including a pixel electrode
provided for each pixel, and a driving element provided for
5 each of said pixel electrodes;

a second substrate disposed opposite to said first
substrate and including an opposite electrode; and

a liquid crystal layer sandwiched between said first
substrate and said second substrate,

10 wherein said pixel electrode has a recess in groove
shape formed therein.

2. An active-matrix liquid crystal display
according to claim 1, wherein said pixel electrode has a
generally rectangular shape, and said recess is provided
such that it extends from one of a pair of opposite sides
5 of said pixel electrode to the other to divide said pixel
electrode into two parts.

3. An active-matrix liquid crystal display
according to claim 1, wherein, when a voltage is applied
between said pixel electrode and said opposite electrode,
liquid crystal molecules in said liquid crystal layer are
5 laid toward a longitudinal direction of said recess in

accordance with the magnitude of said voltage.

4. An active-matrix liquid crystal display according to claim 2, wherein, when a voltage is applied between said pixel electrode and said opposite electrode, liquid crystal molecules in said liquid crystal layer are
5 laid toward a longitudinal direction of said recess in accordance with magnitude of said voltage.

5. An active-matrix liquid crystal display according to claim 1, wherein said pixel electrode is continuously formed across said recess.

6. An active-matrix liquid crystal display according to claim 2, wherein said pixel electrode is continuously formed across said recess.

7. An active matrix liquid crystal display according to claim 1, wherein a conductive layer of said pixel electrode is removed in said recess.

8. An active-matrix liquid crystal display according to claim 2, wherein a conductive layer of said pixel electrode is removed in said recess.

9. An active-matrix liquid crystal display

according to claim 2, wherein said recess is formed linearly with a constant width.

10. An active-matrix liquid crystal display according to claim 2, wherein said recess is formed in said pixel electrode in tapered shape such that it has a smaller width at one of a pair of opposite sides of said pixel
5 electrode and has a larger width at the other.

11. An active-matrix liquid crystal display according to claim 2, wherein said recess is formed linearly with a constant width except that it has a smaller width in its central portion in a longitudinal direction.

12. An active-matrix liquid crystal display according to claim 2, wherein said recess is formed such that its width is smaller in its central portion in a longitudinal direction of said recess and becomes gradually
5 larger toward each of a pair of opposite sides of said pixel electrode.

13. An active-matrix liquid crystal display according to claim 2, further comprising a guide in bank shape formed on said first substrate along a side of said pixel electrode in parallel with a longitudinal direction
5 of said recess.

14. An active-matrix liquid crystal display according to claim 2, wherein said recess has a generally rectangular cross section.

15. An active-matrix liquid crystal display according to claim 2, wherein said recess has a generally reversed trapezoidal cross section, and an angle formed between a surface of said pixel electrode other than its
5 portion corresponding to said recess and a side surface of said recess is equal to or larger than 60 degrees and less than 90 degrees.

16. An active-matrix liquid crystal display according to claim 1, further comprising:

a polarizer; and

at least one of an optically negative compensating
5 film and an optically positive compensating film provided between said first substrate or said second substrate and said polarizer, whereby refractive index anisotropy in a layer including said liquid crystal layer and said compensating film is made isotropic.

17. An active-matrix liquid crystal display according to claim 2, further comprising:

a polarizer; and

at least one of an optically negative compensating

5 film and an optically positive compensating film provided between said first substrate or said second substrate and said polarizer, whereby refractive index anisotropy in a layer including said liquid crystal layer and said compensating film is made isotropic.

18. An active-matrix liquid crystal display according to claim 1, wherein said liquid crystal layer comprises a liquid crystal material with negative dielectric constant anisotropy, and liquid crystal
5 molecules in said liquid crystal layer are aligned perpendicularly to each of said substrates when no voltage is applied between said pixel electrode and said opposite electrode.

19. An active-matrix liquid crystal display according to claim 2, wherein said liquid crystal layer comprises a liquid crystal material with negative dielectric constant anisotropy, and liquid crystal
5 molecules in said liquid crystal layer are aligned perpendicularly to each of said substrates when no voltage is applied between said pixel electrode and said opposite electrode.

20. An active-matrix liquid crystal display according to claim 18, further comprising quarter-wave

plates provided on both sides of said liquid crystal layer,
respectively, said quarter-wave plates having optical axis
5 orthogonal to each other.

21. An active-matrix liquid crystal display
according to claim 19, further comprising quarter-wave
plates provided on both sides of said liquid crystal layer,
respectively, said quarter-wave plates having optical axis
5 orthogonal to each other.